

19980403.ba v01_n997.bam.980403

>From ???@??? Sat Apr 04 05:32:09 1998
Message-Id: <199804031520.JAA16028@sco.theporch.com>
Date: Fri, 3 Apr 1998 09:18:06 CST
Subject: BOATANCHORS digest 1997

BOATANCHORS Digest 1997

Topics covered in this issue include:

- 1) Heathkit Service Bulletins - SB-101 (Complete to 1989)
by joelutz@juno.com (Joseph W Lutz)
- 2) Collins Log Perodic Antenna
by Marty Raine <mraine@compusmart.ab.ca>
- 3) Re: HV power supply question??
by Ho4bart <Ho4bart@aol.com>
- 4) tube sub?
by "Roger A. McCarty" <rmccarty@earthlink.net>
- 5) Re: HV power supply question??
by Michael Hanz <AAFRadio@erols.com>
- 6) zm-30/u bridge
by k5pgw@linknet.net
- 7) WTB Heath antenna tuner
by "Ed Santavicca" <santavic@ct.picker.com>
- 8) BC-1335
by arc5@ix.netcom.com
- 9) WTB TV-7 Tube Tester
by "Freeberg, Scott (STP)" <scott.freeberg@guidant.com>
- 10) Re: R392 Question
by "A. B. Bonds" <ab@vuse.vanderbilt.edu>

To: Old Tube Radios <boatanchors@theporch.com>
Cc: joelutz@juno.com
Date: Fri, 3 Apr 1998 00:14:22 UTC
Subject: Heathkit Service Bulletins - SB-101 (Complete to 1989)
Message-ID: <19980403.001425.3398.1.JOELUTZ@juno.com>
From: joelutz@juno.com (Joseph W Lutz)

June 12, 1967

SB-101

Bulletin No:

SSB Transceiver

SB-101-1D

Driver Oscillates on 40 Meters

Remove C-924 [.02 disc capacitor] from across 150K ohm resistor & delete from circuit.

November 1, 1967

SB-101
Bulletin No:
SSB Transceiver

SB-101-2D

Switch Action

Improvement

DELETE: (2) 253-67 (2) WASHER, .1860D, .054 THICK (1 EA FOR 100-445)

ADD: (2) C253-67 (1) " " " "
" (FOR 100-445)

ADD: (2) B255-79 (1) SPACER, 1/8 SHOULDER, THREADED

ADD: (2) A263-7 (1) FOOT, FELT, 1/8" THICK

DELETE: (4) 266-91 (1) ACTUATOR, SLIDE SWITCH

ADD: (4) 266-97 (1) " " " "

NOVEMBER 1, 1967

SB-101
Bulletin No:
SSB Transceiver

SB-101-3D

Improper Tuning

Delete: [2] 26-109 [2] Variable Capacitor, 2 Sect. P.C. Mtg

Add: [2] 27-122 [2] Variable Capacitor, 2 Sect. P.C. Mtg

Delete: [4] 85-131-1 [1] PC Board, RF Driver Mixer [85-131
Screened 605-1225]

Add: [4] 85-131-2 [1] PC Board, RF Driver Mixer [85-131 Screened
605-1616]

Reason for change: To correct tuning trouble.

APRIL 18, 1968

SB-101
Bulletin No:
SSB Transceiver

SB-101-4D

Improper Tuning on 40

Meters

Description of Change:

DELETE: (2) B21-31 (50) CAPACITOR, DISC .02 MFD Z5U
ADD : (2) B21-31 (49) " " "
" " "

DELETE: (4) 85-131-1 (1) PC BOARD, RF DRIVER MIXER
ADD : (4) 85-131-1 (1) " " "
" "

REMOVE: C-424 installed across R-401

NOTE: SBM-100-1 called for the installation of this capacitor on SB-100 units. This capacitor should now be removed.

June 3, 1968

SB-101

Bulletin No:

SSB Transceiver

SB-101-5D

Grounding Problems on Transceivers

A quality of factory wired transceivers have been shipped with loose rivets both at the rear phono sockets & at the final tube sockets. This is causing a serious grounding problem. Corrective recommendations are shown on the attached sheet:

[[[[[[[[[[[[[NOTE: IF MY INTERPRETATION IS NOT CLEAR - PSE LET ME
KNOW]]]]]]]]]]

Illustration shows the installation of a ground buss for the rear panel phono sockets. It also states that if the final tube socket rivets are loose, they should be drilled out & replaced with 6-32 hardware.

November 25,

1970

SB-101

Bulletin No:

SSB Transceiver

SB-101-1

Meter

Zeroing

Original 10-147 control tolerance not sufficient to allow zeroing in all units. This part is being respecified to a closer tolerance. In the meantime, any field problems regarding zeroing of the meter can be corrected as follows:

Change: R-107 from 100K Ohm to 82K Ohm (1-159).

September 14, 1972

SB-101

Bulletin No:

SSB Transceiver

SB-101-2

Repeated Heterodyne Oscillator Failure

Change: R-212 from 220 Ohm to 330 Ohm 1/2 Watt resister (1-4).

May 23, 1974

SB-101

Bulletin No:

SSB Transceiver

SB-101-3

SB & HW Series Audio Amplifier & VOX
Circuit Trouble Shooting Guide

It is assumed that the basic steps such as making DC voltage measurement, checking tubes & reviewing the soldering have been completed.

The following information was compiled from the above transceivers in the 80M LSB position. The mike level control was at the 9:00 o'clock position.

AC signal voltages are listed below. These voltages were measured from the microphone connector through the VOX circuit. All measurements were made with a VTVM. A microphone or audio generator for .1V @ 1KHZ can be used as the signal source.

Mike Connector Lug 1

.1VAC

Pin 2 of V1

.02VAC

Pin 6 of V1

10-15VAC

Pin 6 Level Control

10-15VAC

Pin 5 Level Control

.5VAC

Pin 9 of V1

.2VAC

Pin 8 of V1

.1 - .3VAC

Center Arm of VOX Sensitivity Control	5-15VAC
Pin 7 of V17	5-10VAC
Pin 6 of V17	40-50VAC
Junction of C211-D201	40-50VAC
Pin 9 of V12	9-15VAC

By tracing the AC signal from stage to stage the point of trouble can be isolated & steps taken to correct it.

POSSIBLE TROUBLE AREAS

- Check each of the shielded cables for a possible open or poorly grounded shield.
- Check for continuity through each of the shielded cables.
- Check for a proper ground at the mike control level.
- If the frequency response of the audio stage is not within specifications check the values & installation of C1, C2, C3 & C9.
- A change in VOX delay after operating for a period of time can be caused by leakage in diode D201. The other possibility is a change in value of capacitor C213. Either component could experience a change in operation characteristics due to heat.

May 23, 1974

SB-101

Bulletin No:
SSB Transceiver

SB-101-4

Diode Leakage in The SB-100, SB-101, HW-101

The silicon diodes used in the SB100 & SB101 are standard power diodes rated at 500PIV & 750MA. For each condition described, the diodes should be replaced with an equal value to maintain proper operation.

1. Diodes D902 & D903, when leaky, will have an effect on ALC indication. The ALC indication will be normal for the first half hour to an hour. Then the meter indication will start dropping off until there is very little indication.
2. D101, when leaky or defective, will cause slow or no receiver recovery after transmitting for any period of time.
3. D905, under leaky conditions, will cause very slow or no receiver recovery and false meter indications. The meter will kick up scale & slowly drift down to zero.

4. D201 will result in a decrease in VOX sensitivity to the point where the VOX circuit will not be activated. It can also result in increasing VOX delay, causing the relay to stay in the transmit condition.

May 23, 1974

SB-101

Bulletin No:
SSB Transceiver
SB-101-5

SB & HW Series Instability & Corrective
Information

Instability -- Trouble

shooting

We suggest you check for each of the following possible causes:

1. Intermittent, rosin or cold solder joints.
2. Loose hardware at the tube sockets, terminal strips, circuit boards, shields and rear panel sockets.
3. Poor lead dress at tube sockets V8 & V9. The component leads must be short as possible.
4. Check C925 (Final tune capacitor) to be sure it is isolated from the tuning shaft. This is to prevent RF from traveling on the shaft to the front panel.
5. Check all edges of the final enclosures for proper grounding to the main chassis.
6. Check the hardware for the side rails to be sure a good ground is being provided.
7. Be sure that all the ground clips on the coil cover are making good contact with the switch shields.
8. Check the soldering of the switch shields to the center pins of tube sockets V6, V7, V10 & V11.
9. Check the ground leads from the switch board & shields, to be sure they are going to ground foil & not to the preselector capacitor foil pods on the RF driver board.
10. Check for broken or shorted pigtailed on each of the shielded cables in the unit.
11. Check RFC801 & L901 for any signs of deterioration or physical damage, (burn spots). If apparent replace the part.
12. Improper adjustment of the Het. Osc. coils could cause improper mixing action, resulting in the final operating at a different frequency appearing as instability.
13. Change driver & final tubes then reneutralize per manual

instructions.

14. Check driver tube shield to be sure that it has a good ground contact with the socket spring clip.
 15. Check for a good ground between the front panel & chassis.
 16. Check the SWR of the antenna system at the frequency of operation. Should be below 2:1.
 17. Check the antenna coax for leakage, poor connectors & broken shield connections.
 18. Is the transmitter properly grounded?
 19. Be sure all shields & tube shields are installed.
 20. Realign using a properly terminated 50 ohm non-reactive dummy load.
- NOTE: This does not include a light bulb.
21. Check for normal Het. Osc. test-point voltage.
 22. Check for proper LMO injection voltage 1.0-1.5 VRF.
 23. Check for a high AC ripple content in the LV-B+, HV-B+ and bias voltages from the power supply.
 24. Check to be sure that the shafts do not touch each other in the insulated coupling, and that the set screws do not touch the PA shield.
 25. Check to be sure that the PA tune shaft turns the variable capacitor & is not slipping in the insulated coupling.
-

May 23, 1974

SB-101

Bulletin No.

SSB Transceiver

SB-101-6

Alternate Method of Neutralizing The Final Amplifiers

1. Disconnect final plates & screen grid.***
2. Turn unit on.
3. Rotate the BAND switch to 28.5.
4. Place the VTVM RF probe in the ANTENNA connector.**
5. Set the FUNCTION switch to TUNE.
6. Rotate the LEVEL control fully clockwise.
7. Adjust the PRESELECTOR control for a maximum reading on the VTVM.
8. Adjust the FINAL control for a maximum indication on the VTVM, with the LOAD control set at the 50 ohm position.
9. Using an insulated screwdriver, adjust neutralizing capacitor for a MINIMUM indication on the VTVM.
10. Readjust the neutralizing capacitor for a minimum indication on the VTVM.
11. Turn the FUNCTION switch to the off position.
12. Discharge high voltage power supply capacitors.
13. Reconnect final plates & screen grid.

**VTVM & RF probe will be needed.

***To remove screen voltage in SB-100, SB-101, HW-100 & HW-101 disconnect R920 (100 ohm resistor) from buss wire between pins of V8 & V9. In the SB-102 removal of accessory plug is all that's required. To remove high voltage in SB-100, SB-101 & SB-102 disconnect red wire at lug 4 (in Sb-100 lug 3) of terminal strip BK that goes to grommet BL. In HW100 & HW101 disconnect red wire going to lug 1 of RF choke in final cage.

NOTE: Take adequate steps to eliminate any possible contact with B+ or B+ shorts to chassis after disconnecting wire & resistor.

December 18, 1974

SB-101

Bulletin No.

SSB Transceiver

SB-101-7

Oscillations or Low Drive

Loose boards cause sporadic self oscillations & unstable RF conditions, particularly at the high [15 & 10 meter] bands. The comb brackets which have been used are aluminum & could not be soldered. Steel brackets are now available [Part No: 204-2096] & should be used whenever encountered in the field. Both the switch shields & the driver boards should be soldered to these brackets.

This change helps to increase grid drive as well as increase stability.

May 2, 1975

SB-101

Bulletin No.

SSB Transceiver

SB-101-8

Self Oscillations Occurring After Installation of Steel Comb Brackets

It has been found that in a number of units, self oscillations are still occurring after installation of both sets of comb brackets [Part No: 204-2096]. To correct the condition, the screws around the RF driver board must be tightened securely. Also, the lockwashers between the circuit board & chassis must be installed, otherwise a good ground is not assured. Retightening screws which are already snug will also cause these oscillations to disappear in units where it is a problem.

March 29, 1976

SB-101

Bulletin No:

SSB Transceiver

SB-101-9

S-Meter Drift

To bring the meter drift to an acceptable level, install the following:

CHANGE: R107 from 100K Ohm 1/2 Watt to 100K 1 Watt
[PN 1-28-1]

This makes the voltage divider string more stable with temperature changes caused by internal heating.

This change will be made in future production runs.

November 15, 1976

SB-101

Bulletin No:

SSB Transceiver

SB-101-10

Low Receiver Sensistivity

Note: Sensitivity of the unit is worse on the higher frequencies [15] & [10] meters.

Cure: Diode D907 may be in backwards or banded backwards.

September 27, 1977

SB-101

Bulletin No:

SSB Transceiver

SB-101-11

Transceiver Oscillates in Transmit with Mic Keyed

+ + + + Information not yet available + + + +

February 22, 1978

SB-101

Bulletin No:

SSB Transceiver

SB-101-12

Tuning Erratic

Some of the earlier LMOS can be opened up for service, such as cleaning the wiper contacts on the tuning cap when tuning becomes erratic. Some of these units have fiber washers between the frame of the tuning capacitor and the worm gear assembly. Intermittant contact between the teeth of the gears can change the ground path for the tuning cap and also cause erratic tuning. Simply replacing a fiber washer with a metal washer will give good connection between the tuning cap frame and the worm gear assembly to eliminate this problem.

June 5, 1978

SB-101
Bulletin No:
SSB Transceiver
SB-101-13

Relays Remain Energized After Transmit Condition

After keying the transceiver with PTT for thirty to forty seconds, a positive voltage in excess of 10 volts appears at the control grid, pin 9 of V12, thus keeping the relays energized.

To correct the problem, replace V12 [PN 411-124]. IEC brand tubes have been found defective in several cases, but other brands may also cause this problem.

June 5, 1978

SB-101
Bulletin No:
SSB Transceiver
SB-101-14

Poor AGC Action

Leakage in the 6HS6 [PN 411-247] at V10 and/or V11 has been found to cause:

- Poor AGC action
- Fast S-Meter decay,
- Poor sensitivity when RF gain control is fully clockwise.

This usually occurs after warmup of at least an hour. A positive voltage, usually over 1 volt, will appear at the grid, pin 1 of either one or both tubes.

Replacement of the tube with the positive voltage corrects the problem.

June 5, 1978

SB-101

Bulletin No:

SSB Transceiver

SB-101-15

100KHZ Calibrator Spurs

Strong signals may occur at other than 100 KHZ points.

Look at the calibrator output [ahead of output diode] with an oscilloscope. Use high input gain and a slow sweep speed. If the upper portion of the sine-wave signal appears choppy or uneven, the Y201 crystal may be at fault.

After installation of a new crystal [PN 404-43], recheck with an oscilloscope.

July 24, 1978

SB-101

Bulletin No:

SSB Transceiver

SB-101-16

LMO Drift; Intermittent Frequency Shift

Check for a dirty or corroded phono connector on the rear of the LMO. Clean if necessary.

July 24, 1978

SB-101

Bulletin No:

SSB Transceiver

SB-101-17

Poor Preselector Tracking

This problem is more noticeable on the 10-meter band. It may be caused by the drive belt slipping or by one of the variable capacitors not turning due to excessive friction in its bearings.

Check the belt for being loose or worn and replace as needed. Lubricate

the bearing of the variable capacitors.

If lubricating the capacitor bearings does not allow the rotor to turn freely, replace the capacitor [PN 26-122].

July 24, 1978

SB-101

Bulletin No:

SSB Transceiver

SB-101-18

Carrier Nulls With IC14 Trimmer Plates Completely Meshed

If C14 nulls the carrier with its plates fully meshed toward V2 [to the right], relocate C18, 12pf capacitor, to the other section of the null trimmer [C14].

August 7, 1978

SB-101

Bulletin No:

SSB Transceiver

SB-101-19

Relays Chatter In VOX Mode

This may occur when the VOX gain is in the near-full CW position with the MIC level advanced past the 12 o'clock position. Also, the unit will not return to receive when the operator stops talking.

Check the tube at V1. A "GE" tube will tend to oscillate, thus causing the above problem. Other 6EA8 tube brands should operate properly at V1. See Bulletin No: HW-100-15 Dated August 3, 1978

August 7, 1978

SB-101

Bulletin No:

SSB Transceiver

SB-101-20

Loading Capacitor Turns As Plate Capacitor Is Rotated

This problem can be caused by:

- Insufficient friction in the loading capacitor or;

- Excessive friction between the plate and load tuning shafts.

If the problem persists after freeing and lubricating the shafts, install a rubber grommet [PN 73-3] on the loading capacitor shaft between the pulley and the RF cage. Apply slight pressure to the grommet as the pulley set-screw is tightened. This will add enough friction to keep the loading capacitor still while tuning the plate control. Use only as needed.

August 7, 1978

SB-101

Bulletin No:

SSB Transceiver

SB-101-21

"Chirping" And Slow Receiver Recovery

If "chirping" of the audio in the receive mode and slow recovery of the receiver after long periods of transmitting are encountered, remove the cover of RL2 and check for carbon buildup at the base, just below the contact. Clean dirt or carbon tracks, or replace if necessary.

A dirt or carbon buildup will cause the +300 volts to be applied to adjacent contacts such as the bias or AGC lines, adversely affecting receiver cutoff by upsetting the operation of 1] V12, receiver mixer; 2] V10, RF amplifier; and 3] V11, first receiver mixer.

August 22, 1978

SB-101

Bulletin No:

SSB Transceiver

SB-101-22

S-Meter Drift

If the S meter drops below zero and pins after 1/2 hour of operation, there may be leakage in one or more of the following tubes: V3, V4, V10 or V11. New RCA tubes may exhibit the same problem. The following procedure will aid in finding the leaky tube:

1. Disconnect R415 to isolate V3 and V4 from the AGC line. Monitor the control grid at P1 of V3 for several minutes. If the voltage drifts in the positive [+] direction, V3 or V4 is leaky. Proceed to step 2. If the voltage remains stable, go to step 5.

2. Remove the white/blue wire from pin 2 of T102 and repeat the

test. This will isolate V4 from V3. If the voltage still drifts, V3 is at fault.

3. To verify, reconnect the white/blue wire and then disconnect R101. Monitor the voltage at pin 1 of V4. The voltage should remain stable.

4. Reconnect R415 and R101.

5. Disconnect R408 and check the voltage at pin 1 of V10. If voltage drifts, replace V10. If the voltage is stable, replace V11.

6. Reconnect R415 and R408.

Straight substitution with new tubes may not work if more than one tube is causing the problem, since even a small leakage can cause the drift. When you replace a tube, check for stable voltage at its control grid. Replace with the tube which gives most stable voltage.

September 26, 1978

SB-101

Bulletin No:

SSB Transceiver

SB-101-23

Poor IF Sensitivity

Check C101. It may have inadvertently been wired to point 2. It should be wired to point 15. It is an "easy-to-overlook" wiring error that would cause the transceiver to have low if sensitivity which would result in poor receiver sensitivity and low power output.

April 25, 1979

SB-101

Bulletin No:

SSB Transceiver

SB-101-24

Low Power Output; Poor Vox Sensitivity

It has been determined that Sylvania, RCA and Westinghouse brand tubes do not function properly at locations V3 and V4.

The brands found to work at these locations are: El-Menco, IEC, General

Electric and Realistic.

Westinghouse tubes at other locations throughout the unit may cause low power output and VOX problems. It is suggested not to use Westinghouse tubes at all.

September 20, 1979

SB-101

Bulletin No:

SSB Transceiver

SB-101-25

Low Transmitter Output; Low Receiver

Sensitivity

When cleaning the unit during prework [tube sockets, potentiometers, etc.], don't overlook the SSB/CW filter slide switch located with the RF gain control. This switch handles both transmit and receive signals and dirt and grease build-up can affect the performance of both functions.

January 21, 1980

SB-101

Bulletin No:

SSB Transceiver

SB-101-26

Low Grid Drive on Certain Portions of One or More Bands

+ + + + Information not yet available + + + +

April 10, 1980

SB-101

Bulletin No:

SSB Transceiver

SB-101-27

Germanium Diode Change

+ + + + Information not yet available + + + +

December 17, 1980

SB-101

Bulletin No:

SSB Transceiver

SB-101-28

VOX Oscillation

+ + + + Information not yet available + + + +

That's all that is listed for the SB-101 up to 1989. Enjoy!

73 de Joe W7LPF/4 [NNN0KUU]
QWCA - SOWP - NCVA - FISTS - RCC
Gordonsville, Va 22942 [Orange Co]

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Or call Juno at (800) 654-JUNO [654-5866]

Message-ID: <352480BA.120B@compusmart.ab.ca>
Date: Thu, 02 Apr 1998 22:24:58 -0800
From: Marty Raine <mraine@compusmart.ab.ca>
MIME-Version: 1.0
To: Old Tube Radios <boatanchors@theporch.com>
CC: boatanchors@theporch.com
Subject: Collins Log Perodic Antenna
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Hello to all:

Yesterday while on a visit to an Alberta heavy-duty DX'er location...I counted 13 towers on the property...I spotted an antenna boom set up on stands for storage. When I asked..I was told that it is a Collins-built log perodic antenna sold to the then RCAF for northern communications service. The boom is triangular construction, 62 feet. The longest elements are 80 feet! Freq range is 6.5 to 40 Mhz. It will handle MANY kilowatts. He also has the original 100 foot tower and rotator issued with it. When I suggested I might kill for something like that to put on the end of my Collins gear, he smiled, but didn't bite. No deal, I guess. I don't have a lot for it to fit on anyway...just dreaming. His contest station setup is something to behold....had a nice Henry 5K, several ETO linears, others.

Marty
VE6TS
CCA & BA

From: Ho4bart <Ho4bart@aol.com>
Message-ID: <a05b696c.35248059@aol.com>

Date: Fri, 3 Apr 1998 01:23:20 EST
To: Old Tube Radios <boatanchors@theporch.com>
Mime-Version: 1.0
Subject: Re: HV power supply question??
Content-type: text/plain; charset=US-ASCII
Content-transfer-encoding: 7bit

In a message dated 98-04-02 21:01:18 EST,
n4fs@monmouth.com writes:

> The
> capacitor across the choke provides a zero of transmission and offers a
> higher rate of rolloff than the typical pi filter. So this kind of filter,
> provided that the resonant frequency of the L and C parallel combination
> (the filter zero other than the one at infinity) is less than the ripple
> frequency, will attenuate the ripple more than the simple pi would.

---there is a WW2-era US military receiver that uses an external ACPS
with just this kind of filter, i can't recall which right now, but not a rare
one,
is something like RBS, ARR-7, whose manual explains the resonated-
choke action in these terms, for minimized ac ripple. i've also seen this
idea for constructors either in 1950s CQ or the actual ARRL hints & kinks
column (or collection).
possibly the hassle of having to parallel several capacitors to come up
with the required value (to optimize the action) is partly the reason for
this technique not being more popular.
regards, hue.

From: "Roger A. McCarty" <rmccarty@earthlink.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: tube sub?
Date: Thu, 2 Apr 1998 23:57:38 -0800
Message-ID: <01bd5ed6\$2b7bfc40\$9aa9d9cf@accurate-1>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Can someone suggest a substitute for a 2e32 and a 2e36. These are becoming
hard to find.
Thanks
Roger KD6CC

Message-ID: <3524F534.33DA@erols.com>
Date: Fri, 03 Apr 1998 06:41:56 -0800

From: Michael Hanz <AAFRadio@erols.com>
MIME-Version: 1.0
To: Old Tube Radios <boatanchors@theporch.com>
CC: Boatanchors@sco.theporch.com
Subject: Re: HV power supply question??
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Mike B. Feher wrote:

> The capacitor across the choke provides a zero of transmission and offers a
> higher rate of rolloff than the typical pi filter.

Mike's quite right, but it has an additional purpose. From "Single Sideband Principles and Circuits":

"The input choke should have sufficient inductance to prevent a voltage rise at light loads. The critical inductance is the minimum needed to maintain current in the choke over the full rectified a-c voltage cycle. The value of critical inductance for a 60~ power source is $L = R_{eff}/1,130$, where R_{eff} is the total effective load resistance on the power supply filter."

"One method for reducing the value of input choke inductance needed for regulation is to tune it [with a parallel capacitor]. The shunt value capacitor is selected to tune the choke at the ripple frequency and with the load consisting of the highest value of R_{eff} which will be encountered." [There follows a set of curves, showing the effect on a 3KV supply using a 4H choke - a .2uF cap reduced the voltage rise from no load to full load down to almost zero. There's also a short discussion on the detuning of the circuit at higher current levels, but the critical inductance is lower, so regulation doesn't suffer.]

Finally, they end up with the bottom line: "Proper tuning can permit a several-times reduction in filter choke size." That's money in your pocket, and a lighter PS.

--

73,
Mike Hanz, KC4TOS
Herndon, VA
AAFRadio@erols.com

From: k5pgw@linknet.net
Message-Id: <3.0.5.16.19980403135618.1caf8f6a@popalex1.linknet.net>
Date: Fri, 03 Apr 1998 13:56:18
To: Old Tube Radios <boatanchors@theporch.com>
Subject: zm-30/u bridge
Mime-Version: 1.0

Content-Type: text/plain; charset="us-ascii"

Have ZM-30/U Bridge made by crescent Communications, serial #209. Need operations and maintenance manual if available. Have you used this bridge, if so what does it do well. Please tell me about it. Thanks a bunch, 73, John King, K5PGW

From: "Ed Santavicca" <santavic@ct.picker.com>
To: Old Tube Radios <boatanchors@theporch.com>
Date: Fri, 3 Apr 1998 09:14:32 -0500
Mime-Version: 1.0
Content-Type: text/plain; charset=US-ASCII
Content-Transfer-Encoding: 7BIT
Subject: WTB Heath antenna tuner
Message-Id: <54AEDC3AAD@ct1.ct.picker.com>

Does anyone know if Heathkit ever made an antenna tune that matched the SB equipment line? I have an SB-401, SB-303, SB-200, and SB-610 . To add an antenna tuner that matched would be the final addition to this beautiful green lineup.

thanks

Ed

Ed Santavicca

73 de AA8TV
Piper Warrior N44076
santavic@ct.picker.com

From: arc5@ix.netcom.com
Date: Fri, 3 Apr 1998 08:34:24 -0600 (CST)
To: Old Tube Radios <boatanchors@theporch.com>
Message-Id: <1998437514631322@>
Subject: BC-1335
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii

Lloyd wrote:

>

>A fellow...gave me a NOS BC-1335 (free) what is it (?)
BC-1335 Transceiver, circa 1944-45, 27-39 MC FM,
part of SCR-619, manual TM 11-879.

SCR-619:

Vehicular radio, later also as AN/GRC-12, manual TM-619,
circa 1944-1945 pack and vehicular. Xmtr output 1.5w.
Xtal control with 2 preset channels. Power supplied
by three batteries BC-54. Power for interinternal vibrator
supply TX 6VDC 5.5A Rx 6VDC 3.5A.

Interesting set!

73 DE Dave Stinson AB5S
arc5@ix.netcom.com

Message-ID: <21B46CBD022AD1118F0500805F15A0684509ED@STPMSX05.stp.guidant.com>
From: "Freeberg, Scott (STP)" <scott.freeberg@guidant.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: WTB TV-7 Tube Tester
Date: Fri, 3 Apr 1998 08:54:36 -0600
MIME-Version: 1.0
Content-Type: text/plain

Want to buy TV-7D tube tester. Prefer good operating and physical
condition, and accessories.

Thanks,

Scott WA9WFA Saint Paul Minn
scott.freeberg@guidant.com

To: Old Tube Radios <boatanchors@theporch.com>
From: "A. B. Bonds" <ab@vuse.vanderbilt.edu>
Subject: Re: R392 Question
Message-Id: <1998Apr03.091811-0600@spike.vuse.vanderbilt.edu>
Date: 03 Apr 1998 09:18:10 -0600
MIME-Version: 1.0

In <1.5.4.16.19980402174824.1f7f4c62@mail.mn.uswest.net>, Bill Risch wrote:
>Greeting military fans,
>I have a chance to pick up a R392. There is no documentation
>with it and I am not familiar with the beast so I have some
>questions.

Ah, a wart. So ugly ya gotta love 'em.

> 1. What are the power requirements?
> There is a big power plug (multi pin) on the
> front but what is needed for power.

26 vdc at 5 amps or so. The run current is actually more like 2.8 amps, but the start (cold filaments, 26 of 'em) is about 8 amps. This will choke a lot of smaller supplies.

- > 2. How does it compare as a receiver to others of
> the breed? Sensitivity, bandwidth etc.

In order to compensate for the apparently lower gain with 26 v plate voltages, they have one extra IF stage (compared with an R390A). The front end is virtually identical, save the use of 6AJ5 instead of 6AK5 (again, for lower plate voltage). That being said, in comparison with my R390A, I usually cannot tell the difference. The 390A can occasionally bring stuff out of the mud a tad better. You get what you pay for. See Josh Provero's page, has a very nice comparison of these units. The bandwidth options are not nearly so good as a 390A. You get "2 kc", "4kc" and "8kc", which are very nice for AM, but inadequate for crowded ham bands.

- > 3. Anyone got a spare manual for it?

The manual is about 100 pages. Best plan is to get it from Fair radio. Good copy, printed on heavy stock, costs about \$18.

- > 4. Any tips or tricks that I should know?

Wear a back brace. They only look small.

The audio power amp tube is usually cooked (600 mW filament), get a spare in any event.

Look out for broken slug shafts (they are little springs that flex and can break).

The power plug is hard to find, you may have to improvise.

The speaker plug is easy to find, on the end of an LS-16. These actually sound pretty good for voice comm and are relatively cheap and abundant (e.g., Fair).

- > 5. What is a reasonable price range for a clean unit?

Fair sells a "used, repairable" unit (without meter) for \$185. These usually work, but need tweaking. Their Reconditioned units are \$275 or thereabouts. These are clean and work to spec. I'd say if you found a clean, complete, operating unit a reasonable price is \$200-\$250. Cruddy fixer-upper, about \$100.

A. B. "They'll have to pry my R-392 out of my cold, dead hands" Bonds

End of BOATANCHORS Digest 1997
